Resolution 1540: progress in reviewing implementation

United Nations Security Council Resolution (UNSCR) 1540 aims to prevent proliferation of weapons of mass destruction, related materials and technologies. The resolution requires states to refrain from providing any support to non-state actors across a range of activities, including the manufacture, acquisition, possession, development, transport, transfer or use of nuclear, chemical or biological weapons and their means of delivery. Under the resolution, states are required to adopt and enforce appropriate effective laws that prohibit these activities by non-state actors. The resolution also requires states to adopt measures that account for, physically protect and control transfers of nuclear, biological and chemical materials.

On 25 April 2006, the chair of the UN Security Council 1540 Committee submitted a report[1] to the UN Security Council on the committee's operation and on states' progress in implementing resolution 1540, since its adoption on 28 April 2004. Aided by a cadre of experts appointed from February 2005,[2] the committee spent 12 months scrutinizing reports provided by 129 states[3] in accordance with paragraph 4 of UNSCR 1540. A further 62 states had not filed a report by April 2006. In response to the committee's request for comments on its initial review and for additional information 79[4] of the 129 states submitted additional information. However, various factors—late hiring of experts, time-consuming internal political consultations on technical issues, late responses to requests for further information, and development of a legislative database to increase transparency on the status of implementation—meant that this was not included in the report to the Security Council.

In the report, the committee proposed extending its own work and that of the experts for a second mandate period. The Security Council agreed, adopting UNSCR 1673 on 27 April 2006, which declared that 'the 1540 Committee shall intensify its efforts to promote the full implementation by all States of resolution 1540 (2004) through a work programme which shall include the compilation of information on the status of States' implementation of all aspects of resolution 1540'. It also specified that 'the 1540 Committee will submit to the Security Council a report no later than 27 April 2008 on compliance with resolution 1540'.[5]

During the first mandate period, committee activities (from April 2005) were based on four programmes of work, each lasting for three months.[6] To overcome the lack of a long-term perspective in these programmes, the committee proposed, for the second mandate period, the creation of a 12-month work programme. Its development, though, proved surprisingly difficult: it took five months of negotiations before agreement was reached (in October 2006) on the fifth work programme, covering 1 October 2006–30 September 2007.[7]

In this issue...

Volker Beck examines the status of reporting and reviewing under UN Security Council Resolution 1540, while Daryl Kimball assesses the prospects for US ratification of the CTBT. Plus a detailed look at the challenges facing CITES, as well as the regular features: Verification Watch, Science and Technology Scan, and VERTIC News and Events.

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The fifth work programme tasked the 1540 Committee with:

- increasing its knowledge by examining the information on the status of implementation of UNSCR 1540; and
- engaging in outreach, dialogue, assistance and cooperation to promote implementation of all aspects of UNSCR 1540.

Certain aspects are of particular interest, such as the requirements to:

- 'research publicly available websites of Governments and international organizations in order to identify legislation and other measures for States that have yet to report and, in an effort to encourage them to prepare and submit their first report, share that information with those States in the form of a matrix';
- 'continue to maintain and update matrices for reporting States, including taking into account additional information received from States';
- 'undertake further examination in areas where the initial examination of reports revealed gaps in information or implementation related to all aspects of the resolution'; and
- 'work towards achieving the objective set out in operational paragraph six (Op6) of UNSCR 1673'.

The fifth work programme enables the committee to play a more active role vis-à-vis those states that have not submitted a first report. This involves providing assistance as well as challenging them with a matrix (prepared by the committee) containing publicly available information on existing national legislation, with the purpose of generating a positive response in the form of a first report.

In addition, the committee will continue to share information on its examination of the first national report with the reporting state, and it will contact states that have already submitted additional information—*after a period of time to be determined by the committee*—in order to maintain the dialogue. This process will use information in the committee-endorsed matrices to examine further states' implementation of UNSCR 1540. In this context, it is of interest that the updated version of the committee's report, due for submission to the Security Council by 27 April 2008, will include the additional information received from states and that the committee plans to undertake supplementary evaluations in areas where gaps in information or implementation exist.

The time clause highlighted above relates to complaints from UN members on the burden of international reporting requirements, which is overstretching national capacities. However, time is of the essence, and if the substantive results of the dialogue with states that have submitted additional information are to be included in the report of April 2008, the committee needs to secure their approval of its interpretation of this information soon. Indeed, the committee seems to have already started contacting states for comments on its evaluation of additional information.

It will also be fascinating to see what other information the committee uses in updating and examining a state's status with respect to 1540 obligations and whether all of this information is shared with a state. It is interesting that the work programme does not refer to information in the committee's own legislative database.

Last, the report to the Security Council, referred to in Op6 of resolution 1673, will be a report on *compliance* with UNSCR 1540, not just, as at the end of the first mandate period, a report on implementation.

Under this work programme, the committee also has, most notably, to:

- 'continue to brief the Security Council and the UN Membership formally and informally about the work of the Committee and the obligations and requirements of SCR 1540';
- 'continue, through its experts, to act as a clearing house';
- 'co-ordinate assistance requests to help States offering assistance to work together with States that need such assistance'; and
- 'make use of the meetings of international, regional and sub-regional organizations and other arrangements to address the obligations of States to implement resolution 1540 (2004) fully, and invite representatives of those organizations to participate in relevant meetings and workshops'.

These initiatives seek to address criticisms of the committee levelled at the end of the first mandate period.

Transparency

Briefing the Security Council in open meetings as well as the UN membership generally on the work of the committee is part of the 1540 Committee's commitment to transparency. However, its website gives the impression that there is less rather than more transparency, given the reduced number of briefings to the Security Council. It is also surprising that the agreement of three states (Pakistan, South Africa and the United States) to post their national laws and regulations on the committee's legislative database website[8] seems still to be pending.

Improved facilitation of assistance

A comparison of language on the key issue of assistance in the fifth work programme with that in previous work programmes and that used in past briefings to the Security Council reveals that only limited progress appears to have been made despite recent grandiloquent expressions. The main focus remains '*collecting up-to-date information on the issue of assistance*' and '*informally contacting States to enquire whether they might be interested in receiving information on offers and requests for assistance*'.

The committee still acts as a clearinghouse for assistance and seems to play no active role in the provision of assistance. How it coordinates assistance requests, to help states making offers work with those in need, has not been made particularly clear to date. An indication that not much is actively managed can be gleaned from the committee's website: under the 'assistance' heading, there is a list of states, international organizations and other arrangements offering assistance,[9] but no states are listed that have requested assistance with national implementation in their reports.

The aforementioned commitment of the committee to search publicly available websites to identify legislation and other measures to aid states that have yet to report, and to share that information with those states in the form of a matrix, is a commendable approach to helping them with fulfilling their reporting obligations under UNSCR 1540. But this is not the type of aid requested in national reports.

On 11 and 12 July 2007, the committee met in New York with states, international and regional organizations and non-governmental organizations (NGOs) offering implementation assistance to comment on its activities and, specifically, on lessons learned regarding effective methods of delivering assistance.[10] The committee pointed out that several states and other entities were interested in offering assistance, but matching it with the needs of states had been difficult. Consequently, there is a need to develop a dialogue between the committee, the states and other entities offering assistance and those requesting it. This will likely go a long way towards improving the committee's knowledge of specific assistance offered and, importantly, promoting necessary additions to the assistance toolkit.

National action plans for implementing resolution 1540, such as that of the US,[11] are a welcome instrument for improving assistance efforts, but, at the same time, they may limit the committee's own freedom of decision-making.

Enhanced and coordinated outreach

Since 2004, the committee's chair, members and experts have participated in 41[12] outreach activities to raise awareness of resolutions 1540 and 1673, and to address problems with implementing UNSCR 1540 in full. Twenty-three of these outreach activities took place within the first mandate period, whereas the others, including three regional workshops—organized by the United Nations Department for Disarmament Affairs (UNDDA)[13] and the 1540 Committee—in Beijing (China), Lima (Peru) and Accra (Ghana), occurred in the second mandate period. These workshops were tailored to tackle the matter of non-submitting states in three areas: Southeast Asia and the Pacific, the Caribbean Islands, and Africa.

The results are not very encouraging when one compares the increase in outreach activities with the number of states failing to provide first reports and additional information. The result is even worse when one considers that in parallel, international organizations and NGOs ran a number of their own outreach initiatives on national implementation of nuclear, chemical and biosafety/biosecurity obligations, including those required by resolution 1540. The initiatives included assistance on export control and law enforcement issues.

Facilitating improved reporting rates

It appears that the committee's outreach activities since the end of 2005 have had little impact on the rate of submission of first reports (see Table 1). In addition, these activities were not behind the provision of additional information by states; this was spurred by written communications from the committee.

A close look at the dates of submission of first reports reveals that in January 2006, 125 reports were filed. In the final days of the first mandate period, four more first reports were received, two of which came from the Pacific region where New Zealand[14] had provided bilateral assistance to non-submitting states to help them prepare their first reports. Of the seven first reports received in the second mandate period, two also came from that region. One report was submitted following efforts made by a committee expert to convince his home country to do so, and three were filed by states before the workshops organized by UNDDA and the 1540 Committee, although their preparation may have been influenced by the preparations for these gatherings.

States that have yet to present their first reports point to several reasons why they have not fulfilled their obligations under resolution 1540. These include reporting fatigue caused by the overburdening of national administrations, the low priority afforded to proliferation concerns on national policy agendas, the dominance of regional security problems over global security matters, and the lack of or bad governance. States that have still to submit their reports may fulfil their reporting obligation only when direct assistance is rendered. The committee's approach—preparing a matrix for each of

Table 1 Reports to and activities of the 1540 Committee

	First reports	Additional information	Outreach activities	Experts
October 2004	64	–	2	–
January 2005	101	–	3	–
April 2005	115	–	5	4
July 2005	120	1	6	8
October 2005	125	24	12	8
January 2006	125	66	19	8
April 2006 (end of mandate)	129	83	23	8
July 2006	132	86	24	6
October 2006	132	87	27	5
January 2007	134	87	33	5
April 2007	136	87	39	5
July 2007	136	87	41	8

these states, and sharing it bilaterally with a state—seems likely to generate commitment with 1540 obligations.

However, the low response rate following regional outreach initiatives to convince states to meet their reporting obligations seems to be even worse in the sphere of national implementation activities. Here, progress may only be achieved through bilateral assistance provided by the 1540 Committee, by an international organization, on a state-to-state basis, or via other arrangements. In this area, more has to be done in the future and the committee should play a more active role.

Conclusions

During the first mandate period (April 2004–April 2006), the 1540 Committee concentrated primarily on the compilation and examination of information provided by states in their first reports and that obtained from publicly available sources, and it communicated the results of the process with states. During the second mandate period (May 2006–April 2008), the main focus of the committee's work—besides the continuing evaluation of additional information—has been on providing assistance to states that have not yet submitted a report as well as to states seeking to improve their national implementation of UNSCR 1540. Regional and sub-regional outreach activities, such as workshops and seminars, may create awareness of UNSCR 1540 but do not offer specific assistance to overcome reporting fatigue or to close gaps in national implementation. Both problems may be tackled more effectively through the provision of bilateral assistance focussed on single states rather than through regional outreach activities. With the knowledge derived from its examination process, the committee could play a more active role here by matching states and/or organizations offering specific assistance with states requesting such help. The meeting on 11 and 12 July 2007 opened up the possibility of progress in this direction. However, progress will only be achieved if the committee is allowed to assume a more active role.

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Coordinator of the experts to the 1540 Committee, February 2005–April 2006

Endnotes

1 United Nations Security Council, 'Report of the Committee established pursuant to resolution 1540 (2004)', Letter dated 25 April 2006 from the Chairman of the Security Council Committee established pursuant to resolution 1540 (2004) addressed to the President of the Security Council, S/2006/257, 25 April 2006.
2 Initially, four experts were appointed; a further four were recruited following an April 2005 decision of the 1540 Committee.
3 One organization, the European Union, also provided a report.
4 Before the end of the first mandate period another four states submitted additional information, bringing the total to 83.
5 Operational paragraphs 5 and 6 of UNSCR 1673, 27 April 2006.
6 The first four programmes of work were for the periods: 1 April–30 June 2005; 1 July–30 September 2005; 1 October–31 December 2005; and 1 January–28 April 2006. See http://disarmament2.un.org/Committee1540/programmeofwork.html.
7 See http://disarmament2.un.org/Committee1540/doc/programmeofwork01Oct2006(E).doc.
8 See http://disarmament2.un.org/Committee1540/list-legdb.html.
9 See http://disarmament2.un.org/Committee1540/dir-assist.html.
10 See http://www.un.org/News/briefings/docs/2007/070712_1540.doc.htm.
11 See http://disarmament2.un.org/Committee1540/otherdocuments/USNationalActionPlan.pdf.
12 Figure derived from Security Council document S/2006/257, 25 April 2006, and briefings by the chair of the 1540 Committee at open meetings of the Security Council on 30 May 2006, 28 September 2006 and 22 May 2007.
13 Now the United Nations Office for Disarmament Affairs (UNODA).
14 See www.mfat.govt.nz/Media-and-publications/Media/MFAT-speeches/0-23-February-2007.php.

Prospects for US ratification of the CTBT

On 24 September 1997, President Bill Clinton transmitted the 1996 Comprehensive Nuclear Test Ban Treaty (CTBT) to the United States Senate for its advice and consent for ratification.[1] After much delay, the Republican-led Senate agreed to a short debate and a vote on the CTBT in September and October of 1999. On 13 October, however, the Senate failed to muster the 67 votes necessary for ratification and rejected the treaty by 51 votes to 48. The highly partisan debate and vote placed the US in a state of test ban policy limbo that is detrimental to its national security.

Since 2001, the administration of President George W. Bush has said that it will retain the United States' voluntary nuclear test moratorium but that it will not ask the Senate to reconsider the CTBT or approve its ratification. The administration has actively opposed UN resolutions calling for CTBT entry into force and has boycotted meetings of CTBT states parties designed to help facilitate entry into force.

As a result, a decade after the CTBT was transmitted to the Senate, the US has not ratified it and will not do so until sometime after 2009. This situation is self-defeating and counterproductive.

There is no military requirement for new nuclear warheads that would necessitate renewed US nuclear testing, and senior administration officials have said that there is no need to resume nuclear testing for the foreseeable future. As a signatory to the CTBT, the US is obligated under international law not to take any action that violates the 'purpose or intent' of the treaty. Moreover, until the CTBT enters into force, the full benefits of its verification and monitoring system, including the option of on-site inspections, will not be available.

The Bush administration's approach requires the US to assume most CTBT-related responsibilities, but robs US diplomats of the moral and political authority to encourage other nations to join the treaty, to refrain from testing, and to help strengthen confidence in the beleaguered global nuclear nonproliferation system.

Though the number of treaty signatures has risen to 177 and the number of ratifications stands at 140, 10 Annex II[2] states have yet to ratify. China and Israel have signed the CTBT but have delayed their ratification processes. Other states including India and Pakistan have not yet signed the treaty and it is highly unlikely they will do so unless the US, China, and perhaps other hold-out states finally ratify.

As 2008 presidential hopeful Republican Senator John McCain noted back in 1999, the Senate can and should reconsider the CTBT. Republican Senator Pete Domenici noted in a press release immediately following the vote: 'Treaties never die, even when defeated and returned to the Executive Calendar of the Senate. Therefore, we will have another chance to debate the CTBT.'[3] Also, as Republican Senator Chuck Hagel and Democrat Senator Joseph Lieberman wrote in *The New York Times* in late 1999: 'A clear majority of the Senate have not given up hope of finding common ground in our quest for a sound and secure ban on nuclear testing'.[4]

This article analyzes the prospects for reconsideration and ratification of the CTBT by the Senate and the conditions and steps necessary to make it happen.

What went wrong in 1999

To understand what has to go right, it is useful to look back to 1999 to understand what went so wrong. The Senate's rejection of the treaty was a shock to many in the US and around the globe, but a closer examination of the run-up to the vote makes it clear that circumstances were not conducive to success.

As *Arms Control Today* pointed out in December 1999: 'The "no" vote was the consequence of the political miscalculations of treaty proponents; the failure of many senators to understand core issues; the deep, partisan divisions in the nation's capital; and the president's failure to organize a strong, focused and sustained campaign'.[5]

The Republicans stymied all debate on the treaty for two years after the CTBT was transmitted to the Senate. In mid-1999, though, they outmaneuvered Senate Democrats and established a short 12-day schedule for debate. Without the benefit of a long (months), high profile White House campaign in support of the CTBT, treaty proponents were unable to counter effectively the outdated arguments against the treaty and a few new questions and falsehoods that were raised by treaty opponents. As Senator John Warner, the Republican Chair of the Senate Armed Services Committee, noted shortly after the vote: 'much of the confusion [about the treaty] is based on misconceptions and wrong information'.[6]

Creating the conditions necessary for Senate approval of the CTBT

Moving forward and securing the 67 Senate votes needed for ratification will be a difficult task, requiring favourable political conditions and a well executed campaign. The history of other US treaty ratification campaigns and the CTBT effort from 1997–99 suggests that these conditions will include:

- strong presidential support and active leadership;
- building bipartisan support for the treaty inside and outside the Senate;
- the development of a powerful technical case to overcome scepticism about the value of the CTBT in meeting US nuclear nonproliferation objectives, the verifiability of the treaty, and the ability of the US to maintain its remaining stockpile of nuclear weapons without testing;
- winning the ongoing debate about whether the US should develop new nuclear warheads;
- preserving the support of a majority of the US public for the CTBT; and
- retaining support for the CTBT among allies and securing ratification by other key states.

Once these conditions are met, CTBT advocates must ensure that there is sufficient time available to frame properly the treaty debate, to educate new senators and their staff, and to address fully counterarguments.

Today, of course, not all of these conditions exist, although the climate is becoming more favourable.

As the 2008 US presidential election approaches, ushering a new president into the White House, it is time to prepare the way for US ratification. As George Shultz, Henry Kissinger, William Perry and Sam Nunn have written, the Senate should initiate a bipartisan process 'to achieve ratification of the Comprehensive Test Ban Treaty, taking advantage of recent technical advances, and working to secure ratification by other key states'.[7]

This process has not yet begun formally, but it may be well under way in slightly more than a year as Democratic-led Congressional committees hold hearings and some votes on proposals to strengthen the nonproliferation system and on issues relating to the CTBT, such as how best to maintain a shrinking US nuclear arsenal in the absence of testing. The Republican and Democratic presidential nominees will task their staff with studying and preparing to deal with a range of nuclear policy issues, including the CTBT, in 2008. This process will accelerate during the important transition period between November 2008 and January 2009.

The presidential candidates

So where do the major candidates stand on the matter of the CTBT? So far there has been no significant discussion among the major Republican candidates on nuclear weapons policy or the CTBT. However, three of them who are or were senators—Fred Thompson, Sam Brownback and John McCain—all voted against the CTBT in 1999. If asked, the others might oppose the CTBT, although it is also possible that they might opt to keep their options open. As with many veteran Republican senators who voted no in 1999, any Republican elected to the White House in 2008 will likely require 'new evidence' or compelling new reasons to support the CTBT.

On the Democrat side, the situation is quite different. All of the party's major candidates are on record in support of the CTBT. In response to a survey question put to each of the Democrats by the Council for a Livable World—'Would you make a Comprehensive Nuclear Test Ban Treaty a priority of your first term in office'—each said 'yes'.[8] The Democratic frontrunner, Senator Hillary Rodham Clinton wrote in the November/December 2007 issue of *Foreign Affairs* that 'I will also seek Senate approval of the Comprehensive Test Ban Treaty by 2009'.[9]

However, as seen in the days of the Bill Clinton presidency, strong statements in support of the treaty alone are not going to be enough to win over sceptical senators. Strong leadership and the commitment of significant political capital are needed to secure the support of two-thirds of the Senate. Other issues, not least the quagmire of Iraq, will dominate the attention of the new president, making the overtures of CTBT ratifying states all the more important.

The Senate

The good news is that the current US Senate is somewhat different to the one that rejected the CTBT in 1999. Thirty-six senators have been elected since 1999—equally divided between the two political parties. Four senators who voted 'no' in 1999 have recently announced their retirement after 2008; one or two of them may be replaced by pro-CTBT Democrats. The number of new senators is significant because it means that many who voted against the treaty are no longer in office and new senators are, in theory, undecided on the CTBT.

However, even if Democrats pick up three or four seats in the 2008 election (as many experts predict), 10–15 additional Republicans must be persuaded to vote 'yes'.

In contrast with the Clinton administration's earlier efforts, a new US president fully committed to the CTBT would likely need to appoint a special CTBT coordinator devoted solely to winning support in the Senate. He/she would need

to devote considerable time and attention to building and securing support for the treaty, especially from Republican and Democratic foreign policy heavyweights. The administration would have to map out a step-by-step process to delineate why the treaty is in the national security interest, involving public speeches, expert reports and hearings on Capitol Hill. One step might be to establish a new bipartisan commission to answer key questions about the treaty ahead of any Senate debate on the CTBT.

The next Senate debate on the CTBT will again revolve around the three key questions, listed below, that were posed in 1999. In each area, the evidence in favour of the CTBT has grown, although many of the old misperceptions continue to thrive.

a. Is the combination of national technical means and the international monitoring system sufficient to detect and deter CTBT violations?

Most Bush administration officials, even those who do not support CTBT ratification, recognize that the US benefits from monitoring capabilities that are currently only available through the CTBT's International Monitoring System (IMS), including monitoring stations in China, Russia and other sensitive locations that the US would otherwise not be able to access.

However, CTBT proponents must also establish that combined monitoring, on-site inspections and transparency measures are adequate to prevent cheating. To do so, they must show that when the combination of national technical means and civilian seismic networks, plus the option of on-site inspections are taken into account, no would-be cheater could confidently conduct a nuclear weapon test explosion underground, underwater, or in the atmosphere without a very high risk of detection.

b. Should the US continue to rely on its stockpile stewardship programme or pursue new replacement warheads to maintain its arsenal?

Although the Department of Energy has determined each year for the past decade that the US nuclear arsenal remains safe and reliable without nuclear testing, critics of the test ban still claim—as they did in 1999—that as time goes on there will likely have to be some tests to address possible aging problems with the nuclear stockpile.

All of the technical evidence available, though, says that these critics are wrong. A July 2002 report of the US National Academy of Sciences stated that the US: 'has the technical capabilities to maintain confidence in the safety and reliability of its existing nuclear-weapon stockpile under [a test ban], provided that adequate resources are made available to the Department of Energy's nuclear-weapon complex and are properly focused on this task'.[10]

Furthermore, government studies[11] on plutonium longevity completed in 2006 found that the plutonium primaries of most US nuclear weapons have a minimum lifespan of 85 years, twice as long as previous estimates.

Nevertheless, the Bush administration has initiated a new and poorly defined programme—the Reliable Replacement Warhead (RRW) programme—to design and build new warheads to 'replace' certain types already in the arsenal. A chief selling point for the programme is the assertion that the current approach to stockpile stewardship is unsustainable and unreliable and that the RRW will reduce the likelihood of the US resuming testing.

National Nuclear Security Administration (NNSA) officials argue they can build replacement warheads without nuclear explosive proof testing. However, a 2007 report by an independent group of nuclear weapons scientists known as JASON finds that it is by no means certain that the proposed RRW design can be validated as 'reliable'.[12] While many legislators have their doubts, some believe that if the new warheads are indeed more reliable, then test ban sceptics in the Senate should be more willing to support CTBT ratification.

It is doubtful that a new programme for new replacement warheads would be enough to convince the sceptics and may be more risky for the CTBT. Given that the new replacement warheads are years and billions of dollars away from reality, many CTBT sceptics might argue, as they did in 1999, that it is too early to tell whether the new warheads will work reliably and without proof testing.

Of course, building a new generation of nuclear weapons to win support for a global test ban runs counter to the spirit of the treaty and the 1968 Non-Proliferation Treaty (NPT), which seeks to end qualitative nuclear arms competition. RRW, however, has an uncertain future because several member of Congress oppose it. If they do not succeed in cutting funds for the programme this year, they may do so next year.

c. Is the treaty vital to meeting nonproliferation objectives?

Treaty proponents must establish that the CTBT will have a strong positive effect on building international support for measures to strengthen the nonproliferation system. They must underscore how action on the CTBT would help to restore confidence that the nuclear weapon states will fulfil their NPT disarmament commitments made at the 1995 and 2000 NPT Review Conferences. In addition, proponents must convince the sceptics that the CTBT can also help to head off and deescalate destabilizing nuclear arms competition. Ratification by Egypt, Iran and Israel would reduce nuclear weapons-related security concerns and bring these states further into the

nuclear nonproliferation mainstream. Ratification by Israel could put pressure on other states in the region to follow suit. Iranian ratification would help to address profound and legitimate concerns that it has nuclear weapons aspirations.

The role of other states in strengthening the pro-CTBT norm

The numerous statements by individual governments, the European Union (EU), Non-Aligned Movement (NAM), the Organization of American States (OAS), and the Article XIV CTBT Entry into Force Conference in favour of the CTBT are essential to the maintenance of the test ban norm and convincing the US and other hold-out states to sign and/or ratify the treaty.

While important, such statements are not sufficient. Unfortunately, top leaders of states committed to the CTBT also often fail to press their counterparts in the 10[13] CTBT hold-out states to reconsider their opposition to the treaty or to move forward with ratification. If they are truly committed to the treaty, CTBT ratifying states must exercise much more consistent, high-level diplomacy in support of its entry into force.

It is vital that over the next year, the prime and foreign ministers of states that support the treaty make clear public calls for action on the CTBT. In the early weeks of the next US presidential administration, US allies must communicate the importance of US ratification. CTBT ratifying states would be wise to schedule the next Article XIV Conference on Facilitating Entry into Force in late 2009 in New York, which would help to focus the attention of the next US administration on the treaty at an early stage.

CTBT signatories also have a responsibility to rebuff US actions that would damage the CTBT norm. In the final months of the Bush presidency, it is conceivable that, in response to enquiries from Senators who oppose the CTBT, the administration may reinterpret US legal obligations as a signatory to the CTBT. Moreover, the White House and Congress must be urged to address US funding shortfalls for the Provisional Technical Secretariat of the CTBT that threaten completion of the verification and monitoring system.

In the coming months, the United States is also expected to put forward another version of its proposal to exempt India from the guidelines of the Nuclear Suppliers Group (NSG) that restrict nuclear commerce with states, such as India, that do not accept full-scope International Atomic Energy Agency (IAEA) safeguards. The move would be unprecedented, especially for a state (India) that still refuses to consider signing the CTBT, and from a state (United States) that refuses to reconsider ratification of the CTBT. The situation is also unprecedented in that it provides states supportive of the CTBT with an opportunity to leverage more support from states that do not fully support the treaty.

Rather than ignore this opportunity, NSG member states should require— as one condition for exempting India from the NSG full-scope safeguards standard—that New Delhi makes a legally binding commitment not to conduct nuclear weapon test explosions or nuclear explosions of any kind. At the very least, NSG states should decide that nuclear trade shall be terminated and all nuclear material, technology, and equipment must be returned to the states that supplied them in the event that India resumes nuclear testing.

Conclusion

US ratification of the CTBT is within reach. With the 2008 US election approaching, it is vital that CTBT supporters put the treaty back on the US political map, avoid developments that would damage the CTBT regime, and move to secure ratification by other key states before the next opportunity to secure US ratification slips away.

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Endnotes

1 This article is adapted from a presentation made by Daryl G. Kimball at the VERTIC–ACA seminar on 'The CTBT: Achievements, Challenges, and Opportunities' in Vienna, Austria, on 18 September 2007.
2 Annex II lists the 44 states that must ratify the treaty for it to enter into force.
3 Federation of American Scientists, 'Domenici opposed CTBT ratification, says vote "should not have happened"', News Release, 13 October 1999, www.fas.org/nuke/control/ctbt/text/101399domenici.htm.
4 Chuck Hagel and Joseph I. Lieberman, 'Don't Give up on the Test Ban', *New York Times*, 16 October 1999.
5 Daryl G. Kimball, 'What went wrong: repairing damage to the CTBT', *Arms Control Today*, December 1999.
6 See Kimball, 1999.
7 George Shultz, Henry Kissinger, William Perry and Sam Nunn, 'Toward a nuclear weapons free world', *The Wall Street Journal*, 4 January 2007.
8 For full results of survey see www.clw.org/media/emails/presidential_candidates_respond_to_questions/.
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10 US National Academy of Sciences, *Technical Issues Related to the Comprehensive Nuclear Test Ban Treaty*, Committee on Technical Issues Related to Ratification of the Comprehensive Nuclear Test Ban Treaty, Committee on International Security and Arms Control, National Academy of Sciences, 2002.
11 National Nuclear Security Administration, 'Studies show plutonium degradation in US nuclear weapons will not affect reliability soon', 29 November 2006, http://www.nnsa.doe.gov/docs/newsreleases/2006/PR_2006-11-29_NA-06-46.htm.
12 JASON, The MITRE Corporation, 'Reliable replacement warhead: executive summary', JSR-07-336E, 7 September 2007.
13 The 10 CTBT hold-out states are China, Colombia, Democratic People's Republic of Korea, Egypt, India, Indonesia, Iran, Israel, Pakistan and the US.

CITES looks to the future, many challenges ahead

The 1973 Convention on International Trade in Endangered Species (CITES) entered into force in 1975 and currently has 171 states parties. CITES Conference of Parties (COPs) have been held every two or three years since the adoption of the treaty. The most recent meeting, COP14, took place in The Hague, Netherlands, on 3–15 June 2007.

CITES works by controlling and regulating international trade in certain species. All import, export, re-export, and introduction from the sea of species covered by the convention has to be authorized through a licensing system. Each party to the convention must designate one or more 'Management Authorities' in charge of administering the licensing system as well as one or more 'Scientific Authorities' to advise it on the effects of trade on the status of species.

Species covered by CITES are listed in the treaty's appendices, which offer different levels of control according to the degree of protection a species is considered to need. Appendix I contains species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances. Appendix II contains species not necessarily threatened with extinction, but in which trade must be controlled to avoid utilization activities incompatible with their survival. Appendix III contains species that are protected in at least one country, and which has asked other CITES parties for assistance in controlling trade in them. CITES provides a list of biological and trade criteria to determine whether a species should be included in the appendices. Parties can make proposals, based on these criteria, to amend the appendices. The proposals are submitted to a vote.

Trade, listings and management

COP14 saw several decisions concerning species' listings and management and the adoption of a 'Strategic Vision' for the treaty, covering the period 2008–13. One of the most prominent agenda items was on elephants and the ivory trade. Discussions at the conference resulted in a significant outcome: parties agreed to a nine-year resting period for ivory sales after a one-off sale of government-owned ivory stocks. The CITES Monitoring of Illegal Killing of Elephants (MIKE) programme supplied baseline data on elephant populations and poaching in order to guide decision-making in this area. MIKE was established in 1999 to provide an objective assessment of what impact future ivory sales may have on elephant populations and poaching. Its overall goal is to impart information needed by African and Asian elephant range states to make appropriate management and enforcement decisions and to build institutional capacity for the long-term management of their elephant populations.

That ministers from the African elephant range states reached consensus on how to address this contentious issue, 18 years after CITES banned the ivory trade, is a major step forward. The global debate on the African elephant has been difficult and protracted as it has focused on conflicting issues such as the benefits that income from ivory sales may bring to conservation and to local communities living side by side with elephants and concerns that such sales may encourage poaching.

Although the decision to allow a one-off sale is controversial, conservation groups note that the chief problem in this area is illegal domestic ivory markets. Despite some movement on enforcement issues (see below), lack of time prevented the conference from dealing effectively with poaching and illegal markets.

Many of the proposed listings of marine and timber species were rejected. In particular, conservation groups saw the withdrawal of the proposal to list cedrela (a tropical tree species) as a missed opportunity to introduce better management and measures to control trade in this endangered species. In addition, spiny dogfish and porbeagles failed to achieve a listing. Certain types of coral proposed for listing were also rejected. Conservation groups have pointed out that these coral have been over-harvested as a result of a lack of international trade controls and consistent management plans. States parties' conflicting priorities and interests in these areas as well as differing interpretations of the condition of the species can hamper effective decisions on these listings. Further complicating issues in this area were the differing assessments of marine species by the CITES Secretariat and the UN's Food and Agriculture Organization (FAO). While the paucity of action in this area may be seen as a step back from progressive decisions of previous COPs to include commercially valuable species, the need to control the timber and marine trade will increase in the long term given the growing pressure on these resources.

However, the conference did move forward in several areas. Conservation groups welcomed the decision to forbid trade

in sawfish. Also embraced was the decision to regulate the European eel through the CITES permit system to ensure that any trade is well managed and legal and that stocks are not depleted. Furthermore, the downlisting of the black caiman from Appendix I, following recovery in its numbers, shows how CITES management can work effectively. Notably, the conference also agreed that no periodic review of any great whale should occur while the International Whaling Commission's moratorium (implemented in 1986) on commercial whaling is in place.

The conference reviewed progress in conservation programmes for several species including big-leaf mahogany, black rhinoceros, leopard, sharks, sturgeons and tiger. And it addressed new and emerging issues such as protection of the livelihoods of poor communities dependent on wildlife trade and growth in wildlife trade via the internet.

Strategic Vision

The debate on what should be included in the new CITES Strategic Vision centred on three main issues:

- defining what constitutes sustainable trade and how this relates to the broadening of the focus of the treaty to allow it to assume a more comprehensive species' management role;
- the incorporation of broader sustainable development objectives; and
- the relationship between CITES and other forums such as the FAO, the International Tropical Timber Organization (ITTO), the IWC, and the 1982 United Nations Convention on the Law of the Sea (UNCLOS).

Eventually, the debate concentrated on focusing the Strategic Vision on biodiversity conservation rather than on the sustainability of trade.

The aim of the Strategic Vision is to 'Conserve biodiversity and contribute to its sustainable use by ensuring that no species of wild fauna or flora become or remain subject to unsustainable exploitation through international trade, thereby contributing to the significant reduction of the rate of biodiversity loss'. The Strategic Vision includes several goals, notably: ensuring compliance with and implementation and enforcement of the convention; securing the necessary financial resources and means for the convention's operation and implementation; and contributing to significantly reducing the rate of biodiversity loss by ensuring coherence between CITES and other multilateral instruments and processes. The Strategic Vision also includes a range of objectives under each goal relating to, among other things, transparency, capacity building for implementation, enforcement, and cooperation. In particular, cooperation with other intergovernmental organizations (IGOs) is called for to achieve a coherent approach to species' management.

Compliance and enforcement

A selection of compliance and enforcement provisions was agreed at COP14. New rules were set down demanding better coordination between governments and penalties for breaches of the convention. The language on sanctions, however, was weaker than some had hoped—their application is to be 'advocated' rather than 'ensured'.

COP14 'took note of' a new guide for compliance with the convention, covering issues such as identification and monitoring, and measures to achieve compliance, ranging from technical assistance to written warnings and the suspension of trade. The guide stresses certain principles, including a non-adversarial approach to addressing compliance concerns. Several parties had stressed that the guide should focus on facilitative measures and the working group, established at COP14 on this issue, highlighted that it was non-binding.

As for national implementation measures for the convention, states parties reported on progress in adopting appropriate legislation and agreed that parties with membership status of more than five years are to submit any newly enacted national legislation for the implementation of the treaty to the CITES Secretariat. Although some parties had objected to any allusion to the suspension of trade, the final decision includes a reference to consideration by the CITES Standing Committee of appropriate compliance measures, including the suspension of trade, in the event of non-compliance.

With regard to enforcement matters, the COP decided to convene, subject to funding, a group of enforcement experts to gather data on illicit trade. It also made some amendments to CITES decisions, suggesting measures to improve enforcement at the national level.

Finally, attention was drawn to processes regarded as successes in strengthening international cooperation on the enforcement of wildlife laws. Certain activities were highlighted, including exchanges of information among international law enforcement agencies on containers of illegal ivory and the production of identification guides and awareness-raising leaflets on certain species for customs officials.

CITES look forward, more resources required

Some conservation groups welcomed the COP14 decisions on species such as eels, elephants and tigers, but were seriously concerned by missed opportunities to deal with other commercially traded species. They noted, however, that even for those species that had been listed, this was only the begin-

New Executive Director

Angela Woodward became VERTIC's Executive Director on Friday 17 August 2007. Angela has been with VERTIC for eight years and worked in a variety of research and administrative roles, most recently as Deputy Director. Her research focus is on biological, chemical and conventional weapons verification, national implementation of arms control and disarmament treaties and UN Security Council Resolution 1540 and, generally, international law governing arms control, disarmament and the environment.

Angela holds an LLM in Public International Law from the London School of Economics and Political Science (LSE), and a Bachelor of Arts (Honours) degree in Political Science and a Bachelor of Laws degree from the University of Canterbury, New Zealand. She is a part-time teacher in Public International Law at the LSE.

Angela said, 'I welcome this opportunity to lead VERTIC's continuing efforts to tackle some of the most pressing security and environmental issues facing the international community today. Multilateral verification has a vital role in detecting and deterring serious non-compliant activities, as well as building confidence about compliance among the international community. I will ensure that VERTIC remains a space for new thinking and debate on how effective verification can be achieved and, building on the organization's 21 years of experience, I intend to develop VERTIC's role of providing sound and impartial policy analysis to a range of international processes. I would like to thank VERTIC's Board of Directors for entrusting me with this task and I am looking forward to working with VERTIC's staff in my new role'.

ning of the process, the ultimate success of which would depend on effective management underpinned by strong political will and sound law enforcement. Certain factors were underlined in this regard, such as customs authorities recognising specimens and being able to handle confiscated species and public awareness. The European Commission's decision to adopt, on 13 June, a recommendation on an enforcement action plan for its member states was seen as a step in the right direction. The conference, however, was unable to agree on an equally strong formulation on enforcement. Conservation groups also expressed disappointment at the lack of sufficient extra funding from parties for implementation of the convention and for assisting countries with capacity building and enforcement.

While CITES has certainly enjoyed some successes over its relatively long life, increasing pressure on wildlife ensures that many challenges lie ahead. The lack of agreement on the listing of certain tropical timber and fisheries, which involve large economic interests, demonstrates how difficult this may prove. Missed opportunities raise the concern that, in various areas, agreement may only be reached by the time a species is on the verge of commercial extinction, such as with big-leaf mahogany, where agreement took 10 years to secure. In addition, while the listing of caimans in Appendix I is a success, the situation of tigers remains critical—although some attribute this to factors beyond trade, such as habitat loss. The debate on future action on species has been further complicated by arguments which contend that limited trade could provide economic incentives for species' protection and drive increased enforcement. Others contend that the situation differs according to the species in question, so while some trade may help the situation for certain species, it would have detrimental effects on others, for example, tigers.

The challenges already confronting the treaty are considerable. However, more loom as economic activity puts increasing pressure on flora and fauna. Parties must quickly work through their varying disagreements and ensure that informed decisions are taken promptly to prevent international trade threatening the survival of any species. Capacity building, enforcement, compliance and conservation will also need consistent and effective attention to ensure good governance in this complex area of international environmental and developmental action.

Sources: 'Summary of the Fourteenth Conference of the Parties to the Convention on International Trade in Flora and Fauna: 3–15 June 2007', International Institute for Sustainable Development, *Earth Negotiations Bulletin,* vol. 21, no. 61, www.iisd.ca; 'Governments agree tougher wildlife trade rules', *ENDS Europe Daily,* Issue 2343, 19 June 2007; 'Outcome of the 14th Conference of the Parties to CITES', Europa website, http://ec.europa.eu/environment/cites/14th_conf.htm (accessed 26 June 2007); 'CITES: Elephant ivory deadlock broken', WWF Newsroom, 14 June 2007, www.panda.org; 'CITES: 'Commercially traded species a big loser', TRAFFIC, 15 June 2007, www.traffic.org; 'Cash row at wildlife trade forum', *BBC News*, 16 June 2007, http://news.bbc.co.uk/1/hi/sci/tech/6758215.stm; 'CITES conference: Progress linking species trade to livelihoods', IUCN–World Conservation Union News, 19 June 2007, www.iucn.org; 'Governments join forces through CITES to catch wildlife criminals', *CITES Press Release,* 7 June 2007, www.cites.org; 'African governments reach consensus on ivory sales', *CITES Press Release,* 14 June 2007, www.cites.org; 'CITES updates wildlife trade rules to meet emerging challenges of the 21st century', *CITES Press Release,* 15 June 2007, www.cites.org; 'Interpretation and implementation of the Convention—compliance and enforcement issues, compliance and enforcement', COP14, Doc. 26 (Rev. 1), www.cites.org; 'Interpretation and implementation of the Convention—compliance and enforcement issues, enforcement matters', COP14, Doc. 25, www.cites.org.

Verification Watch

New monitoring tool and expanded peacekeeping mission for Sudan

In early June 2007, Amnesty International (AI) launched a new website (www.eyesondarfur.com) for its 'Eyes on Darfur' project, which aims to provide information on the conflict in Darfur to civil society, policymakers and international courts.

The information collected by AI shows the condition of many villages in Darfur before and after an attack. The website draws on satellite imagery, photographs and videos and contains a full report on each village, including detailed testimonies of victims. The website also has satellite data on the current situation of other areas at risk. The compilation of information on this website could become a monitoring tool for civil society and policymakers, helping them to determine the scale of attacks on the people of Darfur.

The level of violence in Darfur escalated considerably in 2003 when two non-Arab rebel groups, the Sudanese Liberation Army (SLA) and the Justice and Equality Movement (JEM), attacked a Sudanese government airbase. The Sudanese government responded by dispatching its own troops and members of Arab tribes known as the Janjaweed. The non-Arab population has been repressed since the outbreak of conflict in 2003. At least 200,000 people have died and two million people have been displaced.

In May 2006, after two years of negotiations mediated by the African Union (AU), the Sudanese government and the SLA faction led by Minni Minawi, signed the 'Darfur Peace Agreement'. Two parties refused to sign the accord: the SLA faction led by Abdul Wahid, and the Justice and Equality Movement. Further negotiations to bring peace to the region will start on 27 October in Libya, under the auspices of the AU and the UN.

On 31 July 2007, the United Nations Security Council adopted Resolution 1769 authorizing the deployment of a joint UN/AU force—the United Nations African Union Mission in Darfur (UNAMID)—to control ongoing violence in the region for an initial period of 12 months. UNAMID will comprise up to 26,000 peacekeepers and will incorporate the existing AU Mission in Sudan (AMIS), which has been active in western Darfur since 2004.

Sources: www.eyesondarfur.org (sections on 'Conflict Analysis' and 'International Response'); 'Briefing Paper: The Genocide in Darfur', Save Darfur, June 2007, www.savedarfur.org/newsroom/policypapers; 'Sudan accepts hybrid United Nations–African Union peacekeeping force in Darfur', UN News Service, 12 June 2007, www.un.org/apps/news; 'Security Council authorises hybrid UN–African Union operation in Darfur', UN News Centre, 31 July 2007; 'UN and African Union envoys convene "pre-negotiation" talks on Darfur', UN News Centre, 3 August 2007; 'Darfur peace talks to begin next month—Ban Ki-moon', UN News Centre, 6 September 2007; Warren Hoge, 'Sudan agrees to Darfur peace talks', *The New York Times,* 7 September 2007; UN Security Council Resolution 1769, UN document S/Res/1769, 31 July 2007; 'Security Council authorizes deployment of UN–AU "hybrid" peace operation in bid to resolve Darfur conflict', UN document SC/9089, 31 July 2007.

Decommissioning in Northern Ireland

The Independent International Commission on Decommissioning (IICD), led by Canadian General John de Chastelain, was established in 1997 by the governments of Ireland and the UK. Its aim is to facilitate the decommissioning of paramilitary group weapons. Within a year of the 1998 Belfast Agreement, the IICD witnessed its first act of decommissioning, on this occasion, by the Loyalist Volunteer Force (LVF). Between 2001 and 2005, the IICD oversaw four acts of decommissioning by the Irish Republican Army (IRA). In 2006, the IICD stated that the IRA had put all of its arms beyond use.

In early May 2007, the Ulster Volunteer Force (UVF) declared that it had renounced the use of violence as a means of opposing the unification of Ireland—the Loyalist terrorist group has killed more than 500 people since its formation in the mid-1960s. However, the UVF underlined that it would not decommission its weapons. Instead, it said that all of its weapons would remain under the control of senior members but beyond the reach of its main body.

The IICD expressed concern about the group's decision to manage possession of the weapons unilaterally. At a meeting between the UVF and the IICD in Belfast two weeks after the announcement, the UVF explained how the weapons are stored and stated that they were beyond use. It is uncertain whether the IICD and the UVF will meet again or whether any further UVF decommissioning processes overseen by the IICD will take place.

Sources: 'Agreement on Independent International Commission on Decommissioning', 26 August 1997, www.nio.gov.uk; 'UVF announces end of terror campaign', *Guardian Unlimited,* 3 May 2007; 'UVF meets decommissioning body', BBC News, 3 May 2007; Brian Rowan, 'UVF meets with arms commission for "frank" discussions', Belfast Telegraph, 18 May 2007.

UN peace mission in Nepal

On 23 January 2007, the United Nations Security Council adopted Resolution 1740, establishing the United Nations Mission in Nepal (UNMIN) for one year. UNMIN is moni-

toring the ceasefire agreed between the government and the Maoist rebels—as set out in the 2006 Comprehensive Peace Agreement—and is assisting with the election of a Constituent Assembly.

Nepal's elections are due to be held on 22 November 2007. UNMIN will provide technical support for planning, preparing and holding the elections. It will also deploy a team to monitor technical aspects of the process and to report on the conduct of the elections.

The UN Election Expert Monitoring Team (EEMT), appointed by UN Secretary-General Ban Ki-moon, will also monitor and assess the electoral process. In June and August, the EEMT visited Nepal to assess progress in the organization of the elections. The EEMT will make several more visits to the country, at key points in the electoral process, and meet with the government, the political parties, members of the current parliament, civil society organizations and national and international electoral observers. So far, the EEMT has reported twice to the UN Secretary-General and to the Nepalese Election Commission on the forthcoming election. Its reports appraise the state of preparations for the elections, including the electoral legal framework, freedom of the press, security, the parties and awareness-raising campaigns. The chief concern highlighted in the reports is security before, during and after the election.

UNMIN's mandate also includes monitoring the management of arms and armed personnel from both sides. UNMIN is responsible for verifying parties' compliance with the Comprehensive Peace Agreement, particularly non-conscription of child soldiers by the Maoist army. The verification process is currently suspended, but so far, it has involved activities such as interviewing all registered combatants in each of the seven cantonment sites. The United Nations Children's Fund (UNICEF) will assist with reintegrating any child soldier identified in the verification process back into society.

Sources: UN Security Council Resolution 1740, S/RES/1740(2007), 23 January 2007; 'United Nations Electoral Expert Monitoring Team starts work in Nepal', UN press release, 12 June 2007; 'Nepal: UN to start phase of monitoring Maoist army personnel', UN News Service, 12 June 2007; 'UN election monitoring team meets PM Koirala', 13 June 2007, www.nepalnews.com; 'July 2007 Forecast: Nepal', Security Council Report, www.securitycouncilreport.org.

3rd COP to Stockholm POPs

The 2001 Stockholm Convention on Persistent Organic Pollutants (POPs) aims to protect humans and the environment from the toxicity and the bioaccumulation of POPs in water and air. It prohibits the production, use and transfer of certain POPs and restricts the production and use of certain others. The convention entered into force in May 2004 and at present, has 144 states parties. The third Conference of Parties to the Convention (COP3) took place in May 2007. One of its major successes was agreement on establishing a method for evaluating the effectiveness of overall implementation of the treaty and the level of implementation by each party. However, states parties did not reach agreement on the creation of a non-compliance mechanism.

COP3 succeeded in establishing three mechanisms for evaluating implementation of the convention:

- the Global Monitoring Programme (GMP);
- five regional monitoring groups; and
- a coordination group.

The GMP has been set up provisionally and is responsible for providing guidance to states parties and the regional groups on how to evaluate implementation of the convention. The guidance will cover sampling and analysis of POPs, quality assurance and quality control (QA/QC) procedures, electronic monitoring, data treatment and data assessment, and communications.

The regional groups will analyze regional implementation and prepare a regional report. They will also develop a regional strategy, promote regional monitoring networks, identify the availability of existing implementing data, coordinate with states parties' sampling and analytical arrangements, and ensure compliance with protocols on QA/QC.

Finally, the coordination group, composed of three members of each regional group, facilitates the preparation of the global monitoring report (an integrated version of the regional reports). In addition, it evaluates regional work and potential impediments to implementing the global monitoring plan. Together, the three mechanisms should make evaluation of the effectiveness of the convention possible.

The convention requires that procedures and institutional mechanisms are adopted to determine non-compliance with its provisions. A draft decision on the procedures and institutional mechanisms was presented for discussion at the Open Ended Working Group on Non-Compliance (OEWG), immediately prior to COP3. The draft decision aimed to establish a non-compliance committee with a mandate to assess whether states parties are in compliance with the treaty and to take action in cases of non-compliance. The outcomes of this discussion were presented at COP3—the OEWG did not reach agreement on various points of the draft decision, notably on the objectives, nature and principles of non-compliance and on which entities could trigger the non-compliance mechanism. As no agreement was reached on the matter, the establishment of the non-compliance committee will be reviewed at COP4 in 2009.

Sources: International Institute for Sustainable Development (IISD), 'Summary of the Third Meeting of the Stockholm Convention on Persistent Organic Pollutants: 30 April–4 May 2007', *Earth Negotiations Bulletin,* vol. 15, no. 154, 7 May 2007, www.iisd.ca; Mariann Lloyd-Smith and Jamidu Katima, 'COP3 report back from the IPEN co-chairs', International POPs Elimination Network, Newsletter, 3 June 2007, www.ipen.org; 'Report of the Conference of the Parties of the Stockholm Convention on Persistent Organic Pollutants on the work of its third meeting', UNEP/POPS/COP.3/30, www.pops.int.

UNMOVIC: an overdue farewell

On 29 June 2007, the United Nations Security Council adopted Resolution 1762 terminating the mandate of the United Nations Monitoring, Verification and Inspection Commission (UNMOVIC) and reaffirming Iraq's disarmament obligations under recent UN Security Council resolutions. The resolution was adopted by 14 (out of 15) votes—Russian opposition to UNMOVIC's termination delayed the adoption of the resolution. Russia argued that an official UN declaration on the state of WMD in Iraq should be made before disbanding UNMOVIC.

The UN Security Council concluded that the role of UNMOVIC and the IAEA's Iraq Nuclear Verification Office (INVO) were 'no longer necessary to verify Iraqi compliance with its obligations under the relevant resolutions'. The UK and the US had been calling for the termination of UNMOVIC's mandate since shortly after the invasion of Iraq in March 2003. In Annex 1 of Resolution 1762, the UK and the US stated that, since March 2003, they had been 'locating, securing, removing, disabling, rendering harmless, eliminating or destroying WMD'.

The Iraqi government had also called for the termination of UNMOVIC's mandate on numerous occasions. Indeed, Annex 2 of Resolution 1762 contains a letter from the Iraqi Minister of Foreign Affairs to the President of the Security Council. In the letter, the minister states that there are no longer any technical or legal grounds to continue UNMOVIC's mandate and that the Iraqi government is 'certain that Iraq currently has none of the programmes or weapons in question'. Iraq called for the termination of UNMOVIC while reaffirming its commitment to the disarmament treaties. In particular, its new constitution states that the Iraqi government respects and is implementing its international obligations on the non-proliferation, non-development, non-production and non-utilization of WMD. The letter also highlights further actions taken by the Iraqi government to prevent proliferation.

UNMOVIC carried out inspections in Iraq from November 2002 to March 2003, and found no evidence of the existence of chemical or biological weapons. Since 2003, UNMOVIC had been analyzing satellite imagery of buildings used for sensitive equipment. Its mandate did not include nuclear weapons, as this was the INVO's responsibility.

Over the course of its mandate, UNMOVIC accumulated a significant amount of equipment to perform its tasks and a large number of files on WMD. Resolution 1762 tasks the UN Secretary-General with providing an 'adequate disposition of UNMOVIC's archives and other property', including strictly controlling access to sensitive proliferation information. The resolution also orders the transfer of all remaining unencumbered monies to the Iraqi government's 'Development Fund' within three months of the adoption of Resolution 1762.

UNMOVIC also gained considerable expertise in arms monitoring, inspection and verification during its lifetime. VERTIC and others have called for the preservation of its expertise and its application for other purposes, but it is uncertain whether the UN will do so, especially since UNMOVIC staff contracts were terminated on 10 July. Proposals include the creation of a UN organization to deal with biological weapons issues, the establishment of a technical assistance unit to aid the UN Secretary-General in investigating biological weapons matters, or the setting up of an organization to address the dual-use nature of biotechnology.

At the end of June, UNMOVIC published its 'Compendium of Iraq's Prescribed Weapons Programmes in the Chemical, Biological and Missile Areas'. It contains an account of Iraq's missile programmes and its biological and chemical weapons, as well as assessments by the inspectors of the strengths and weaknesses of UNMOVIC's verification activities. Sources include various types of imagery, declarations, databases, reports and other documents provided by Iraq.

Sources: 'UN inspection team still together', Global Security Newswire, 4 June 2007; 'Security Council begins to consider disbanding UN team that conducted Iraq WMD inspections', Global Security Newswire, 19 June 2007; 'UNMOVIC bids adieu, warns of further Iraq chemical attacks', Global Security Newswire, 2 July 2007; Colum Lynch, 'UN team still looking for Iraq's arsenal', *Washington Post,* 2 June 2007; Nicholas Kulish, 'End looms for Iraq arms inspection unit', *New York Times,* 18 June 2007; William M. Reilly, 'Analysis: UN weapons inspectors bow out', United Press International, 5 July 2007; Paul Kerr, 'Security Council Ends UNMOVIC', Arms Control Today, September 2007; 'Twenty-ninth quarterly report on the activities of the United Nations Monitoring, Verification and Inspection Commission in accordance with paragraph 12 of Security Council resolution 1284 (1999)', UN document S/2007/314, 29 May 2007; Compendium of Iraq's Prescribed Weapons Programmes in the Chemical, Biological and Missile Areas', UNMOVIC, June 2007, www.unmovic.org.

IPCC 4th Assessment Report

'Climate Change 2007', the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) is available at www.ipcc.ch.

Advent of implementation support unit for BWC

The 1972 Biological Weapons Convention (BWC) entered into force in 1975. At present, the BWC has 159 states parties and 15 signatory states. The treaty prohibits the development, production, stockpiling, acquisition, retention, transferral and use of any microbial or other biological agents or toxins and their means of delivery. Until now, the BWC did not have a body to provide implementation support.

The states parties to the BWC decided at the treaty's Sixth Review Conference, held in Geneva, Switzerland, between 20 November and 8 December 2006, to establish an Implementation Support Unit (ISU) for the BWC. Since entry into force, the states parties have relied on administrative support for treaty meetings and the Confidence Building Measure (CBM) data exchange process, provided through arrangements with the United Nations Department for Disarmament Affairs—now the United Nations Office for Disarmament Affairs (UNODA).

The ISU was officially launched at the 2007 Meeting of Experts of the BWC, held in Geneva from 20–24 August. It was established to provide administrative support by organizing any meetings agreed by the Review Conference and to act as a focal point for the submission and distribution of CBMs among states parties. The ISU, whose mandate runs from 2007–11, is located in the Geneva branch of UNODA and is required to submit an annual report to states parties on its activities. It is funded by states parties to the BWC, and comprises three staff.

The ISU has launched a revised and updated version of the existing BWC legislative database on national implementation measures. It is currently creating an electronic form for states parties' CBM submissions and has set up a secure website, accessible only by states parties, on which CBM submissions are posted. The ISU has also been tasked with compiling the contact details of the national points of contact responsible for CBM submissions. Finally, the ISU promotes the universality of the BWC, collects and disseminates information about the treaty, and gives comprehensive implementation support, primarily by facilitating offers and requests for assistance among states parties and international organizations.

Sources: www.unog.ch/bwc; 'Final Document of the Biological Weapons Convention Sixth Review Conference June 2007', BWC/CONF. VI/6, www.unog.ch (section on 'The Biological Weapons Convention').

Science & Technology Scan

Highlights from the Annual Meeting of the European Safeguards Research and Development Association (ESARDA) in Aix en Provence, France, on 22–24 May 2007:

New, clear methods for nuclear forensics

Nuclear forensics has been an important method of verifying states' nuclear histories since the International Atomic Energy Agency (IAEA) investigated Iraq's nuclear programme in the early 1990s. More recently, it has been used in investigations of nuclear smuggling to attribute—that is, identify the origin of—'orphaned' items of nuclear material. None of the individual technologies employed in nuclear forensics are particularly new, but recent improvements in their accuracy have strengthened the attribution capability considerably.

Klaus Mayer of the European Union's Joint Research Centre highlighted recent developments in the field. One of the cases discussed involved nine fuel pellets of unknown origin. Basic observations such as the size, mass, chemical composition and enrichment level of the pellets identified them as fuel for a CANDU reactor—the Canadian designed heavy water reactor fuelled by natural uranium dioxide (UO_2). The challenge was to identify the fuel manufacturing facility where the pellets were produced. The key to doing so lay in the isotopic composition of the oxygen. Typically, atmospheric oxygen consists of 99.8 per cent of the isotope oxygen-16 and 0.2 per cent of the isotope oxygen-18. The exact proportions, however, vary according to environmental factors such as height and temperature. The isotopic composition of the oxygen in the samples was consistent with only one fuel manufacturing facility (located in Romania). The age of the fuel (which was determined to within 0.2 per cent by measuring the concentration of uranium decay products) was also consistent with the operating history of the plant in question, affirming the material's source.

Nuclear forensics is frequently hindered by the need for a library of reference sources against which samples can be compared. Such a library is not required when using oxygen isotopes for so-called geolocation. This makes geolocation an important tool in the fight against nuclear smuggling.

Source: K. Mayer, M. Wallenius and I. Ray, 'Recent advances in nuclear forensics', paper presented at the 29th ESARDA Annual Meeting, Aix en Provence, 22–24 May 2007.

Theoretical dealings

Theoretical science has not often featured in Science & Technology Scan, but its importance was underlined by an analysis of fuel cycle activities in India presented at the ESARDA meeting by William Charlton of Texas A&M University. The study is salient because of the India–US nuclear deal that is currently being negotiated.

Under this agreement, the US would supply uranium to India, which, in turn, would place all of its civilian nuclear facilities under IAEA safeguards. The US has argued that this arrangement will help to bring India into the nonproliferation regime.

The study set out to determine what effect the India–US deal would have on India's capability to produce unsafeguarded plutonium that could be employed in a weapons programme. Dr Charlton's group created a 'flow sheet' model of India's fuel cycle activities. Currently, Indian nuclear power plants are operating at about 60 per cent capacity to conserve uranium. By supplying uranium, the US would allow India to direct all of its domestic resources at its military nuclear programme, which, under current plans, includes its fast breeder reactors. This would actually increase India's ability to produce plutonium for weapons. Were the fast breeders to be safeguarded then India's military plutonium production capability would be significantly degraded. Dr Charlton also concluded that should the deal not go ahead, India's uranium consumption could exceed production by as early as 2008. This is significant, since, if correct, it suggests that the US has greater leverage in the ongoing negotiations than many have assumed.

Source: T.V.K. Woddi, W. S. Charlton, P. Nelson and J. Ragusa, 'Nuclear fuel cycle assessment of India: A technical study for nuclear cooperation', paper presented at the 29th ESARDA Annual Meeting, Aix en Provence, 22–24 May 2007.

VERTIC News & Events

VERTIC is grateful to the following bodies for grants and commissions received and ongoing in 2007:

- **Esmée Fairbairn Foundation**: £20,000 to contribute towards the project 'promoting international action on climate change: building a workable post-2012 climate change regime' (awarded in July 2007).
- **Ministries of Foreign Affairs of Ireland and Germany**: 2,400 euros each, towards the VERTIC/ACA Seminar 'CTBT: achievements, challenges and opportunities', Vienna, 18 September 2007.
- **Norwegian Radiological Protection Authority (NRPA):** £23,000 to carry out an eight-month research project into the verification of nuclear disarmament. The project runs from March 2007 to November 2007.

VERTIC events and other meetings attended by VERTIC staff

12 March Workshop on civil society, governance and biological weapons, held at the BIOS Centre, London School of Economics (Angela Woodward (AW)).

16 March 'Britain's Trident Decision: Security Implications', joint Royal United Services Institute (RUSI) and Oxford Research Group (ORG) event, London (James Acton (JMA), Poul-Erik Christensen, Andreas Persbo (AP)).

26 March 'Verifying the 1993 Chemical Weapons Convention: challenges facing the Second Review Conference—a civil society perspective', presentation by AW to the Foreign and Commonwealth Office (FCO) seminar marking the 10th anniversary of entry into force of the Chemical Weapons Convention (CWC), London.

29 March Joint stakeholder workshop for the 2007 Review of the UK Export Control Act 2002, London (Michael Crowley (MC)).

3 April UK NGO meeting with the UK Ambassador to the Preparatory Committee (PrepCom) for the 2010 Review Conference of the Parties to the Non-Proliferation Treaty (NPT), London (AP, AW, JMA, MC).

17 April Meeting with Lieutenant-Colonel Naeem Haider (Pakistan), Senior Research Fellow, South Asian Strategic Stability Institute (SASSI), to discuss the operation of the CWC, London (AW, AP, MC, Jane Awford (JA), Rocio Escauriaza (RE)).

23 April Workshop on civil society, governance and biological weapons, held at the BIOS Centre, London School of Economics (AW).

30 April–4 May NPT PrepCom, Vienna (AW, JMA, MC).

3 May 'Balancing Three with Six: Moving towards a Stable Equilibrium', VERTIC and British American Security Information Council (BASIC) event, NPT PrepCom, Vienna (AP, JMA, MC).

11 May 'Cluster Munitions—Towards a New International Treaty', mobilization meeting coordinated by Landmine Action, London (MC).

21 May 'How can Iran persuade the rest of the world that its nuclear programme is peaceful?', VERTIC press briefing, London (AP, JA, JMA, MC, RE).

23 May 'IAEA verification of military research and development', presentation by JMA to the 29th Annual Meeting of the European Safeguards Research and Development Association (ESARDA), held from 22–24 May, Aix en Provence.

30 May 'Verification of nuclear disarmament' research project meeting, Oslo (AP, JMA).

7 June Meeting of the 1972 Biological Weapons Convention (BWC) Informal Assistance Group, Paris (AW, RE).

11 June Meeting with Counsellor Mansour Rahmani, Embassy of Iran, London (AP, JMA, MC).

20–21 June 'Verification of nuclear disarmament', research project meeting, Oslo (AP, JMA).

21 June Meeting with Thomas Wuchte of the US Department of State, Senior Advisor and US Coordinator for United Nations Security Council Resolution (UNSCR) 1540, London (AW, JA, RE).

28–29 June 'The "Next One Hundred" Project: Building a Global Toolkit to Support 1540 Implementation and Strengthen the International Nonproliferation Regime', meeting organized by the Henry L. Stimson Center and the Stanley Foundation, Brussels (AP).

12 July 'Offering assistance to advance UNSCR 1540 implementation: the role of NGOs' and meeting with UNMOVIC, UN Head Quarters, New York (AW).

30–31 July Swiss Meeting on Confidence Building Measures and visit to Spiez Laboratory, Switzerland (AW).

VERTIC's project on National Implementing Measures seeks to help states:

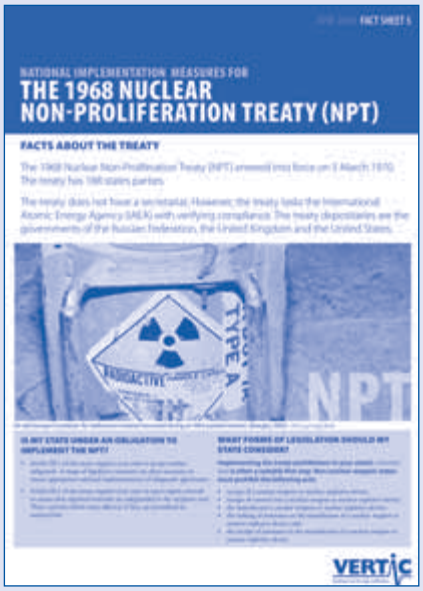
- understand what measures they need to take at the national level to comply with their obligations under certain arms control and disarmament treaties, norms and UN Security Council resolutions; and
- identify sources of technical and legislative assistance to aid them in drafting and implementing national measures.

The project primarily focuses on national implementation measures obligations arising under the: 1963 Partial Test Ban Treaty (PTBT); 1968 Nuclear Non-Proliferation Treaty (NPT); 1972 Biological Weapons Convention (BWC); 1980 Convention on the Physical Protection of Nuclear Material (CPPNM); 1993 Chemical Weapons Convention (CWC); 1996 Comprehensive Nuclear Test Ban Treaty (CTBT); and United Nations Security Council Resolution 1540 (2004).

VERTIC is producing a range of information materials under this project, including the pictured Fact Sheets, a *Guide to national implementation requirements under the principal nuclear, biological and chemical weapons agreements*, and a new section on the VERTIC website providing access to a wealth of national implementation resources. See box on page 16 to learn more about VERTIC's national implementation measures (NIM) website, www.vertic.org/nim, launched August 2007. The site brings together a wealth of resources to help states meet their NIM obligations under international nuclear, biological and chemical law.

For more information, visit www.vertic.org or contact Jane Awford, VERTIC's Information Officer and Networker, by e-mail at jane.awford@vertic.org, by telephone on +44 (0) 20 7065 0880 or by fax on +44 (0) 20 7065 0890.

VERTIC is grateful to the UK Global Opportunities Fund (GOF) administered by the UK Foreign and Commonwealth Office (FCO), and the Government of the Kingdom of the Netherlands, for their generous support for this project.



6–7 August '30 Years of the Additional Protocols of 1977: Regional Meeting on National Implementation of International Humanitarian Law in the Americas', Mexico City (AW).

15 August Meeting with Ian Anthony, Stockholm International Peace Research Institute (SIPRI), to discuss respective projects on arms control (AP, AW).

19–21 August Workshop on verification of nuclear arms reductions, Norwegian Defence Research Establishment, Kjeller, Norway and NRPA-UK project meeting, Oslo (AW, AP).

23 August Meeting with Tom Shea, World Nuclear Association, VERTIC office, London (AP, JA, Larry MacFaul (LM)).

20–24 August 2007 Experts Meeting for the BWC, Geneva (AW, RE).

3–6 September United Nations Security Council workshop on implementing UNSCR 1540 (2004) (organized by Office for Disarmament Affairs), Amman, Jordan (AW).

10 September 'Forest Governance, Carbon and Avoided Deforestation', conference at Chatham House, London (RE).

11 September VERTIC, WMD Awareness Programme, British Pugwash two part event 'Nuclear swords into energy ploughshares' and 'A global cleanout of nuclear weapons material', BA Festival of Science, York, UK (AP, JA, LM).

17–18 September 2nd London Conference on Middle East Weapons of Mass Destruction Free Zone, School of Oriental and African Studies, London (RE).

17–18 September Comprehensive Test Ban Treaty (CTBT) Article XIV conference, Vienna and VERTIC/ACA Seminar 'CTBT: achievements, challenges and opportunities', Vienna (AP/AW/Charlotte Spencer Smith).

17–21 September International Atomic Energy Agency (IAEA) General Conference, Vienna (AP/AW).

15–16 October 'CDM 2.0—what post-2012 mechanisms do we need?' conference and Climate Action Network (CAN) follow-up workshop, Brussels (LM).

17–18 October 'Building a common approach to the Iranian nuclear problem', International Institute for Strategic Studies, Carnegie Moscow Center, Institute of World Economy and International Relations, Moscow, Russia (AP).

VERTIC publications

- *VERTIC fact sheet,* no. 6, 'National implementation measures for United Nations Security Council Resolution 1540 (2004)', February 2007.
- *Verification Matters,* no. 7, Andreas Persbo, 'Thinking inside the box: exploring legal approaches to build confidence in Iran's nuclear programme', May 2007.
- *Verification Matters,* no. 8, James Acton with Joanna Little, 'Use of voluntary transparency measures to increase trust in states' nuclear programmes: the case of Iran', May 2007.
- VERTIC/ACA Seminar report 'The CTBT: achievements, challenges and opportunities, September 2007.

VERTIC publications can be downloaded (free of charge) at www.vertic.org. To obtain print copies, please e-mail jane.awford@vertic.org.

Other publications/submissions

- VERTIC submitted a statement to the UK Foreign Affairs Committee (FAC)'s 'Inquiry into Global Security: Iran' on 8 June 2007. The text will be available on the VERTIC website following publication of the FAC report later this year. Michael Crowley, Andreas Persbo and James Acton authored the submission.
- Angela Woodward contributed to the briefing note 'Making Legislation Work', 15 August 2007, to aid states parties' preparations for the 2007 BWC Meeting of Experts and Meeting of States Parties. The note was prepared by a UK academic working group, and is available on the VERTIC website.
- Angela Woodward contributed to the following working papers for the 2007 Meeting of Experts to the BWC, 20–24 August, Geneva, Switzerland: 'Building Capacity to Implement the Biological and Toxin Weapons Convention: Summary of a VERTIC Project' (working paper submission by UK and Netherlands, BWC/MSP/2007/MX/WP.3, 7 August 2007) and 'National data collection processes for CBM submissions' (working paper submission by Switzerland, BWC/MSP/2007/MX/WP.10, 15 August 2007). These papers are available on the VERTIC website.
- VERTIC contributed to the report of the UN Panel of Government Experts on verification in all its aspects, including the role of the UN in the field of verification, 1 June 2007.

Staff changes

James Acton, VERTIC's Science and Technology Researcher, left the organization in June 2007 to become a full-time lecturer at the Centre for Science and Security Studies, King's College London. **Poul-Erik Christensen** interned at VERTIC from January–April 2007, working primarily on arms control and disarmament projects.

Michael Crowley, VERTIC's Executive Director, left the centre in August 2007 to undertake a PhD at the Department of Peace Studies, University of Bradford. VERTIC's staff and board wish Michael all the best in his research and future endeavours.

Rocio Escauriaza joined VERTIC in April 2007 as a Research Assistant and is examining the status and effectiveness of national implementation measures (NIM) adopted for the BWC, the CWC and UNSCR 1540 on behalf of VERTIC's NIM project. **Paramdeep Mtharu** interned at VERTIC from 30 July–24 August 2007, reviewing Indian WMD law for VERTIC's 1540 Project. **Charlotte Spencer-Smith** interned at VERTIC from 28 August–21 September 2007, organizing the VERTIC/ACA Seminar 'CTBT: achievements, challenges and opportunities'. **Unini Tobun,** VERTIC's Administrator, is on maternity leave—congratulations to Unini and her family on the birth of her son on 18 June 2007. **Angela Woodward** became Executive Director of VERTIC on 17 August, see page 11.

Board changes

Prof. Wyn Bowen joined the VERTIC Board of Directors in September 2007. VERTIC welcomes Prof. Bowen to this position and looks forward to working with him. Prof. Bowen is Director of the Centre for Science and Security Studies, King's College London.

Media coverage

VERTIC provided background briefings and comment to, and/or our events were covered by the following media organizations between March and October 2007: *Adnkronos International* (Italy), *Al Jazeera* (Qatar), *Asahi Shimbun* (Japan), *Financial Times* (UK), *Global Security Newswire* (US), *Guardian* (UK), *Islamic Republic of Iran Broadcasting*, *Islamic Republic News Agency* (Iran), *Jane's Defence Weekly* (UK), *Mainichi Daily News* (Japan), *Radio Netherlands*, *Volkskrant* (Netherlands). Topics discussed included Iran's nuclear programme, North Korea's nuclear programme and chemical weapons issues.

And finally . . .

VERTIC moved offices at the end of September 2007. We are still located on the third floor of Development House. Our contact details are unchanged.

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